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Final

Meeting Minutes Transmittal/Approval
Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
3000 George Washington Way, Walkley Room, Richland, Washington
September 28, 1994

FROM/APPROVAL: Donna Wanek Date 2/16/95
Donna Wanek, 200 Aggregate Area Unit Manager, RL (H4-83)

APPROVAL: Paul R. Beaver Date 2/16/95
Paul R. Beaver, 200 Aggregate Area Unit Manager, EPA (B5-01)

APPROVAL: Dib Goswami Date 4/24/95
Dib Goswami, 200 Aggregate Area Unit Manager, WA Dept of Ecology

Meeting Minutes are attached. Minutes are comprised of the following:

- Attachment #1 - Meeting Summary
 - Attachment #2 - Attendance Sheet
 - Attachment #3 - Agenda
 - Attachment #4 - Action Item Status List
 - Attachment #5 - 200-BP-5 Operable Unit Status
 - Attachment #6 - Project Status of 200-UP-1 Groundwater Operable Unit
 - Attachment #7 - Project Status of 200-UP-1 Treatability Test
 - Attachment #8 - Project Status of 200 West Carbon Tetrachloride ERA
 - Attachment #9 - Project Status of 200-ZP-1 Operable Unit
-

MAY 1995
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Prepared by: Kay Kimmet Date: 2/16/95
Jim Consort, Kay Kimmet, GSSC (B1-42)

Concurrence by: Joseph Zoghbi Date: 2/16/95
Joseph Zoghbi, BHI Project Manager - 200 Areas, (H4-79)
H4-07

Attachment #1
Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
September 28, 1994

Meeting and Summary of Commitments and Agreements

1. **SIGNING OF THE AUGUST 200 AREA UNIT MANAGER'S MEETING MINUTES:** Meeting minutes were reviewed but not all signatories were present.

2. **ACTION ITEM UPDATE.** See Attachment 4 for status:

2AAMS.13 Open. Pending formal transmittal of the groundwater model study.
2AAMS.16 Open.
2BP5.1 Open.
2UP1.2 Open. Still in process.

3. **NEW ACTION ITEMS (INITIATED September 28, 1994):**

2BP5.2 Provide date on streamlining the groundwater sampling effort.
Action: Joe Zoghbi

2UP1.3 Provide regulators with laboratory results on sample point WL5 on
October 14, 1994. Action: Bruce Ford.

4. **INFORMATION ITEMS:**

- Status 200-BP-5 Operable Unit - Dave Erb provided the status of activities (see Attachment #5). PL515 Treatability Testing of primary contaminants has reached MCLs. Dave Myers indicated the Letter of Intent (LOI) will allow drilling of four new wells. A Strontium-90 detection in the reinjection water is expected to be a laboratory error, however, the BY-Cribs are shutdown and waiting on further analytical results.

Jeff James is examining regulatory avenues for the strontium detection concern associated with underground injection at the B-5 unit. If regulatory relief cannot be found an additional ion exchange column will be added. It was agreed to pursue both the regulatory avenue and engineering controls. Work is suspended until resolution. Note: the current drinking water standard for strontium is 8 pCi/L.

Dave Myers noted that a site-wide effort is being implemented through Steve Liedle's office to review sampling and analysis plan features which affect cost. He indicated a goal is to streamline drilling and sampling costs while meeting objectives. He affirmed that BHI will consider methods to reduce costs without impacting the treatability tests. He noted a presentation will be made at a later date. Paul Pak requested a firm date for the presentation as he is interested to see how this effort will impact this schedule.

- Status 200-UP-1 Operable Unit - Curt Wittreich provided the status of this Operable Unit (see Attachment #6). He noted that drilling and sampling activities were complete for well UP1-2, and analytical results have not been received. He noted that analytical results will be provided to Ecology by 14 October 1994, if available. Carbon tetrachloride is a suspected contaminant which these data will confirm.

C. Wittreich indicated Well UP1-3 should be completed by 14 October 1994, however, the drilling and completion schedule has been pushed back to this date due to sampling problems. Nevertheless, a budget underrun is still expected by 150K. Joe Zoghbi expects an underrun of 50K on FY94 and estimates 30K to complete the well.

- **200-UP-1 Pilot Scale Treatment System:** Frank Gustafson discussed the pilot-scale treatment system (see Attachment #7). He noted the extraction rate of 10 gallons per minute (gpm) was slower than expected for well W19-24; well W19-23 was brought online with 7 gpm for a total of 17 gpm. Expect to reach breakthrough by mid-Oct. This one point will reach breakthrough, and bench-scale tests will provide other data points. Phase II should be online late next week. A granular activated carbon (GAC) column was added that cleaned unanticipated trichloroethene (TCE) (from sealer in bottom of column) and carbon tetrachloride. Analytical results from well W19-23 include 1,300 pCi/L Tc-99, 700 µg/L total uranium, 500 ppm of nitrate/nitrite, which are approximately one-third of the concentrations found in W19-24 well. Paul Pak would like the Pilot Scale Treatment data (laboratory scale) graphed for Tc-99 and total uranium and a table with information from the additional GAC column included which shows that treatment cleaned up the TCE and carbon tetrachloride.
- The ion exchange resin change out was a mockup to help HPTs and safety officer make changes before performance in hot mode. Lithium bromide (70 ppm) was used as a tracer to verify that the effluent was not recirculating back to the extraction well. No tracer detected in extraction wells. Paul Pak wants some trend data. Paul Pak requested graph on performance of 7 resins, Frank Gustafson agreed to provide for uranium and Tc-99.
- Status 200-ZP-2 Operable Unit, ERA Activity - Sean Driggers provided an update on activities concerning the carbon tetrachloride plume (see Attachment # 8). The Wellfield Strategy Optimization Report, Proposed Plan for the 200-ZP-2 Operable Unit, and the Draft Carbon Tetrachloride Treatment Alternative Study are scheduled to be delivered to DOE by October 7, 1994.
- Status of 200-ZP-1 - Dan Parker provided the status of the 200-ZP-1 Operable Unit (see Attachment # 9). Treatability test going well. It was agreed to include air stripping instead of UV oxidation in the proposed plan.
- Next Meetings - The next meetings are scheduled for October 20, 1994.

200 Aggregate Area Unit Manager's Meeting
Official Attendance Record
September 28, 1994

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
M.A. Buckmaster	BHI	OU Coord	376-1792
Donna Waneke	RL	OU mgr for RL	376-5778
GEORGE C. HENCKEL III	BHI	Ass't Dir 200 Area Projects	
Kenneth R Porter	ITH	200 Area Task Lead	372-9022
DAVID A MYERS	ITH	Hydrology	372-9491
Tony Knapp	BHI	Hydrology	372-9189
Jim Consoat	Dumora Mgmt/GSSC	AL Support	946-3694
Diana Spekle	BHI	BHI-TPA Support	375-9422
D. B. Ely	ITH	BP-5	372-1402
MICHAEL D. BAKER	ITH	BP-5	373-6862
JEFF JAMES	BHI	Env. Engr. Support	375-9690
Jeff Ross	PRCEMI	EPA Support	206/624-2692
William E. LVM II	USGS	EPA Support	206 5936510
Michael J Galgoul	ITH	200-UP-2 OU TASK LEAD	509 376 2038
Beth Ward	DOE-RL	OU mgr for RL	376-7142
Audrea Hopkins	ITH	Reg Support Compliance	372-9627
CURT WITTEICH	ITH	OU Mgr - UP-1	376-1862
Frank Gustafson	ITH	200-UP-1 Treatability Test	376-1734
D. Goswami	Ecology	200-UP-1 OUM	736-3015
Nancy L. Ziembo	Ecology	O.U. M	736-3014
Paul Pak	DOE-RL	UM	376-4498
Gary Friedman	Ecology	UM	736-3026
Bruce Ford	BHI	Tech Oversight/ 200-UP-1 Support	372-9176
Sean A. Driggers	ITH	200-ZP-2 OU Lead	372-3493
DAN PARKER	ITH	200-ZP-1 OU Coord.	372-1031
KAY KIMMEL	GSSC ID&M	RL SUPPORT	946-3692

Attachment #3
Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
September 28, 1994

Agenda

200 Area Activities

200-BP-5 - D. Erb

- * Action Item Status
- * General Status
- * GW Monitoring Streamlining Proposal

200-UP-1 - Curtis Wittreich

- * Action Item Status
- * Characterization Program
- * Treatability Test Program
- * GW Monitoring Streamlining Proposal

200-ZP-2 - Sean Driggers

- * Carbon Tetrachloride ERA

200-ZP-1 - D. Parker

- * Action Item Status
- * General Status
- * GW Monitoring Streamlining Proposal

200-ZP-2 - Sean Driggers

- * Carbon Tetrachloride ERA

Attachment #4

Action Item Status List
Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
September 28, 1994

ITEM NO.	ACTION	STATUS
2AAMS.13	Transmit the 200-UP-1 and 200-ZP-1 Treatability Test Plans and Mike Connelly's groundwater modeling studies for pump and treat to the regulators. Action: Paul Pak.	Open 03/31/94.
2AAMS.14	Provide to the regulators a map identifying RCRA wells and CERCLA wells for the 200 East and 200 West areas. Action: Paul Pak.	Closed 08/24/94.
2AAMS.16	Provide a schedule describing activities that are required prior to initiating pilot scale studies in the 200-BP-5 Operable Unit by August 1994. Action: Dave Erb.	Open 03/31/94. Activities are ongoing.
2UP1.2	Develop a treatability test plan for denitrification of 200-UP-1 groundwater at laboratory and bench scales, based on the 100 Area Treatability Test Plan for Nitrate. Action: Paul Pak.	Open 05/26/94.
2UP1.3	Provide regulators with laboratory results on sample point WL5 on October 14, 1994. Action: Bruce Ford.	Opened 09/28/94.
2BP5.1	Revise the existing Description of Work to include the use of the cone penetrometer prior to installation of new wells to better locate extraction and recovery wells. Action: David Erb.	Open 05/26/94.
2BP5.2	Provide date on streamlining the groundwater sampling effort. Action: Joe Zoghbi	Opened 09/28/94.

UNIT MANAGERS MEETING

200-BP-5 OPERABLE UNIT

D. B. ERB

SEPTEMBER 28, 1994

200-BP-5 OPERABLE UNIT STATUS

PL515 TREATABILITY TESTING

- * CLEAN-UP LEVELS OF PRIMARY CONTAMINANTS OF CONCERN EXCEED THE SPECIFIED GOAL OF 90% AND FREQUENTLY ACHIEVE 95-99% REMOVAL.**
- * UNIT #1 AT B-5 REVERSE WELL HAS EXTRACTED 5400 GALLONS AND TREATED 2300 GALLONS. EXTRACTION RATE IS ~ 15 GPM.**
- * UNIT #2 AT BY-CRIBS PLUME HAS EXTRACTED 4400 GALLONS AND TREATED 2400 GALLONS. EXTRACTION RATES ARE 3.5-4 GPM**
- * UNITS #1 & #2 HAVE BEEN MODIFIED TO PROVIDE BETTER SAMPLING PORT ACCESS AND TO INSTALL VALVES AND INSTRUMENTATION. WINTERIZATION DESIGNS HAVE BEEN APPROVED AND PROCUREMENT INITIATED.**
- * EXISTING SYSTEM DIAGRAMS HAVE BEEN REVISED TO REFLECT "AS-BUILT" CONDITIONS. PROCEDURES HAVE BEEN REVISED TO REFLECT SYSTEM CONFIGURATION CHANGES.**
- * DRILLING FOR THE BY-CRIBS PLUME IS ON HOLD PENDING DECISION TO PERFORM SEISMIC REFRACTION GEOPHYSICAL SURVEYS**

PL513 GROUNDWATER MONITORING

- * 2nd ROUND, 1994 SAMPLING, SCHEDULED FOR SEPTEMBER, HAS BEEN PUSHED INTO OCTOBER**

200-BP-5 222-S SAMPLE RESULTS
PROCESS SAMPLES TAKEN 9/1/94

Sample #	Location	Unit	Analyte	Value	Units	Error
E8397	Extraction well	B-5	Cs-137	1370	pCi/L	NA
E8397	Extraction well	B-5	Sr-90	4560	pCi/L	NA
E8397	Extraction well	B-5	Pu	11.5	pCi/L	NA
E8398	Past bag filters	B-5	Cs-137	977	pCi/L	NA
E8398	Past bag filters	B-5	Sr-90	5390	pCi/L	NA
E8398	Past bag filters	B-5	Pu	8.15	pCi/L	NA
E8399	Past column #1	B-5	Cs-137	<58.4	pCi/L	NA
E8399	Past column #1	B-5	Sr-90	39.6	pCi/L	NA
E8399	Past column #1	B-5	Pu	<5.14	pCi/L	NA
E8400	Past column #2	B-5	Cs-137	<59.4	pCi/L	NA
E8400	Past column #2	B-5	Sr-90	98.7	pCi/L	NA
E8400	Past column #2	B-5	Pu	<3.29	pCi/L	NA
E8401	Past column #3	B-5	Cs-137	<65.3	pCi/L	NA
E8401	Past column #3	B-5	Sr-90	36.6	pCi/L	NA
E8401	Past column #3	B-5	Pu	<3.45	pCi/L	NA
E8402	Extraction well	BY	Co-60	83.82	pCi/L	33.0%
E8402	Extraction well	BY	Tc-99	3900	pCi/L	NA
E8402	Extraction well	BY	Sr-90	181	pCi/L	NA
E8403	Past bag filters	BY	Co-60	59.3	pCi/L	47.9%
E8403	Past bag filters	BY	Tc-99	1640	pCi/L	NA
E8403	Past bag filters	BY	Sr-90	9.84	pCi/L	NA
E8404	Past column #1	BY	Co-60	<35.4	pCi/L	NA
E8404	Past column #1	BY	Tc-99		pCi/L	
E8405	Past column #2	BY	Co-60	<40.3	pCi/L	NA
E8405	Past column #2	BY	Tc-99	<200	pCi/L	NA
E8405	Past column #2	BY	Sr-90	15.6	pCi/L	NA

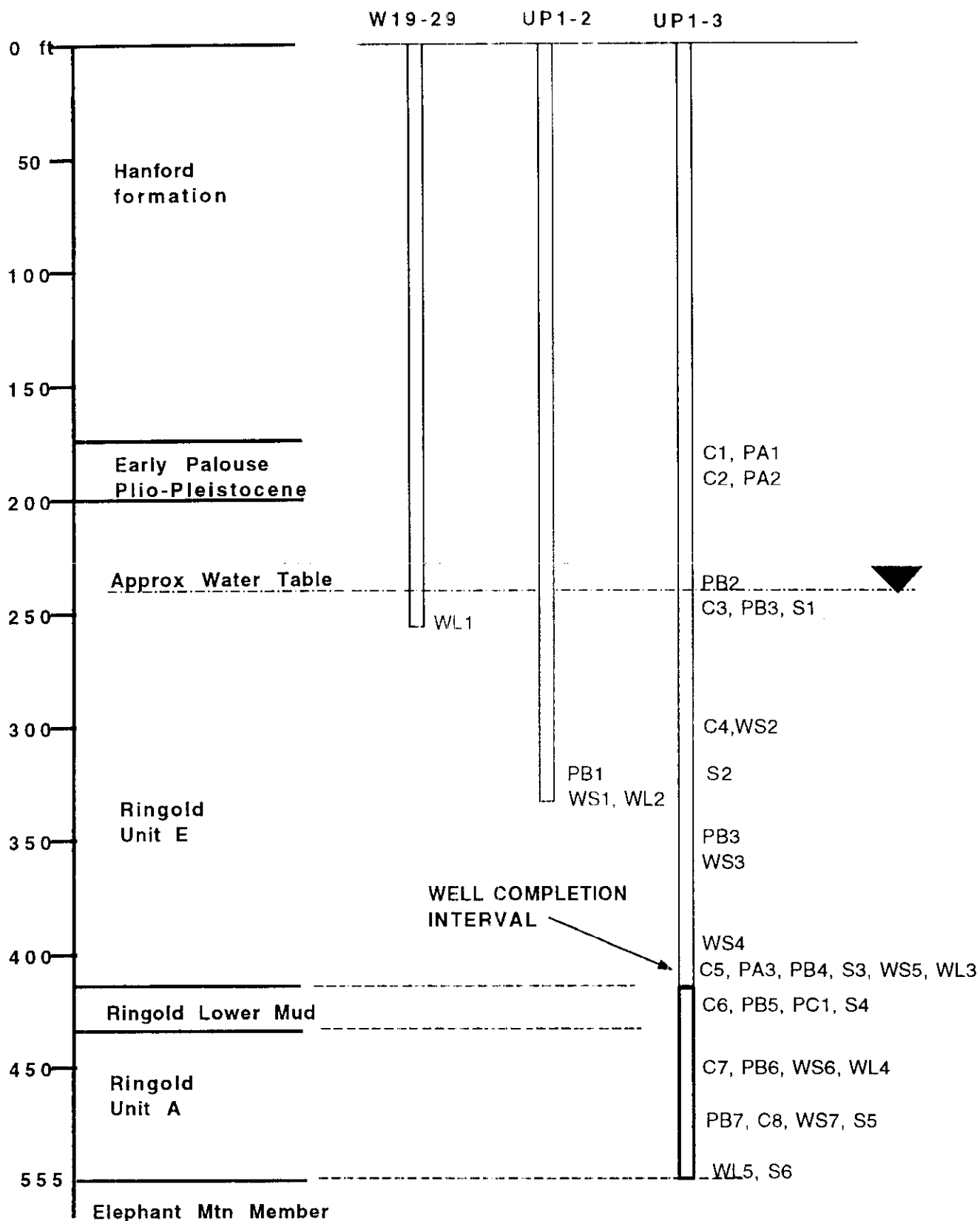
**200-UP-1 GROUNDWATER OPERABLE UNIT
UNIT MANAGERS MEETING
SEPTEMBER 28, 1994**

Curtis D. Wittreich

Frank W. Gustafson

AGENDA

- LIMITED FIELD INVESTIGATION
 - GROUNDWATER MONITORING STATUS
Completing Third Quarter
 - WELL INSTALLATION STATUS
Completed drilling of 4 wells
- TREATABILITY TEST
 - PILOT-SCALE TEST STATUS
 - LAB-SCALE TEST STATUS



PA = Physical A
PB = Physical B
PC = Physical C
C = Chemical

WS = Groundwater Screening
WL = Groundwater Lab
S = Slug Test

200-UP-1 TREATABILITY TEST

OPERATIONAL STATUS

Currently Operating Under Phase I (manual controls)

- Extract groundwater 24 hrs/day @ 10 gpm
- Treat water approx. 4-5 hrs/day @ 50 gpm
- 515,000 gallons treated to date

Phase II (automatic controls) Upgrades Near Completion

- Extract groundwater 24 hrs/day @ 17 gpm
- Treat water approx. 6 hrs/day @ 50 gpm

Operational Issues

- Generator Reliability
- GAC column added to treat for VOA's
- Extraction well capacity reduction
(production rate @ 10 gpm)

200-UP-1 TREATABILITY TEST

EXTRACTION PROCESS

- Well W19-24 Performance
 - Extraction Rate (10 gpm)
 - Drawdown Observations
 - Field/Lab Chemistry Data Summary
- Well W19-23 Being brought online
 - Extraction Rate (7 gpm)
 - Historical Data

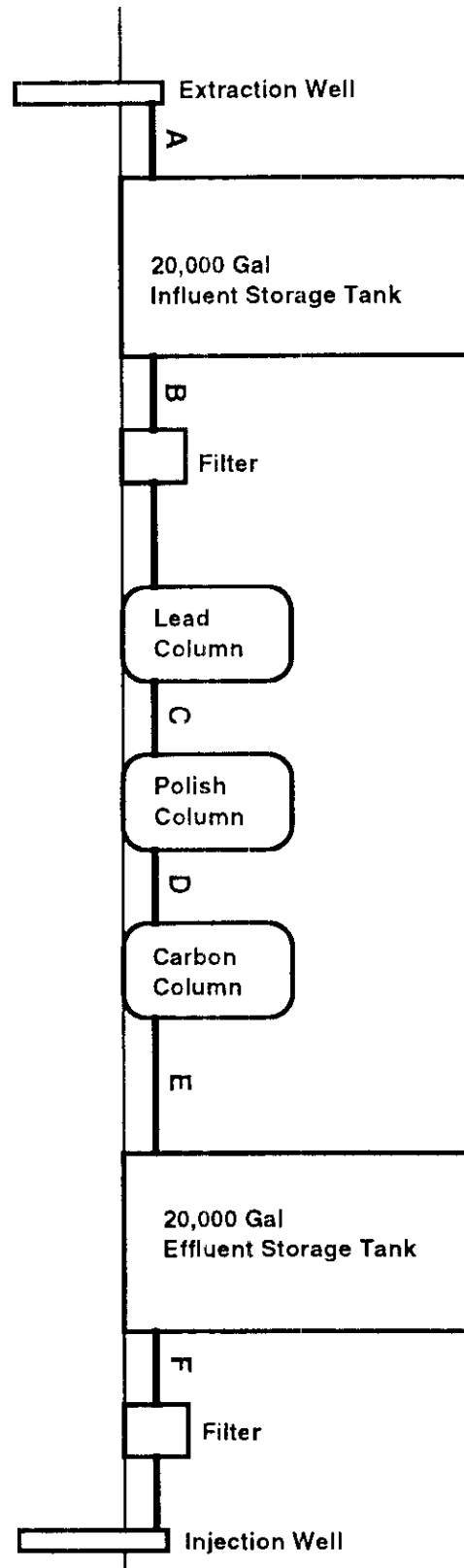
TREATMENT PROCESS

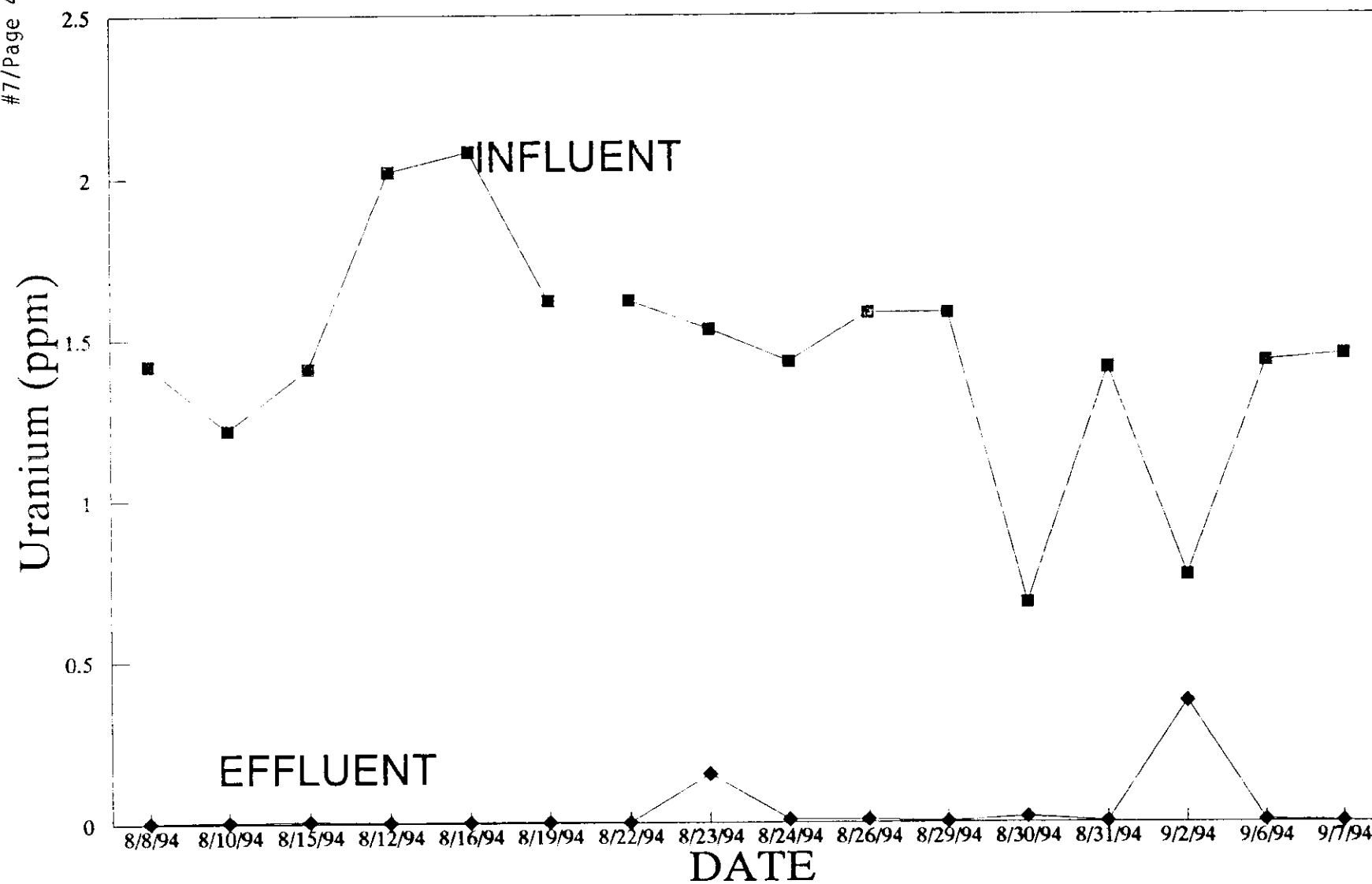
- Process Rate (target 50 gpm for 6 hrs/day)
- Contaminant Removal Efficiencies
 - Uranium
 - Tc-99
 - VOA's
- IX Resin Changeout Mockup

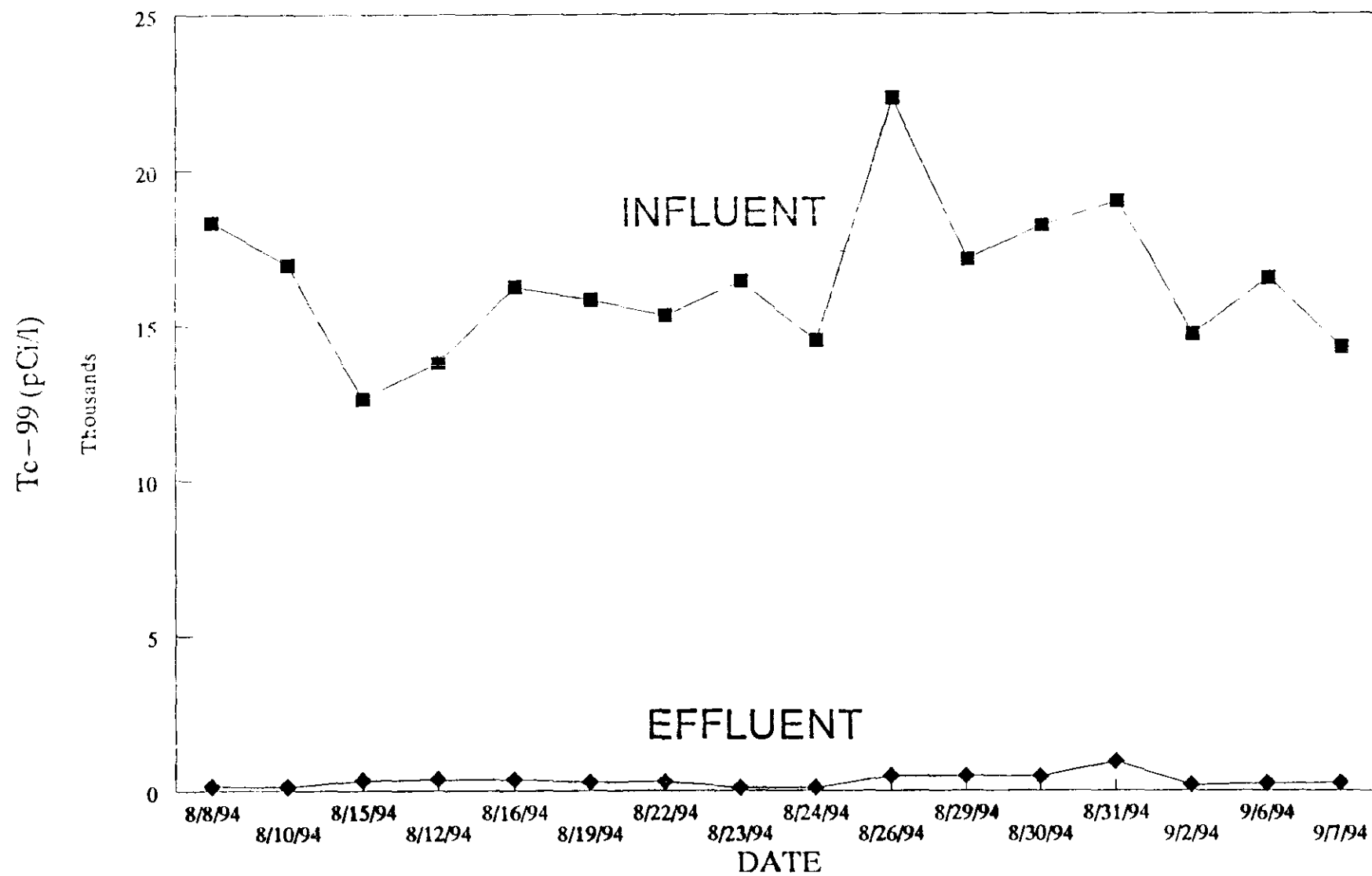
RETURN PROCESS

- Return Rate (17 gpm)
- Mounding Observations
- Bromide Tracer Test Summary

**200-UP-1 PILOT-SCALE TREATMENT SYSTEM
SAMPLING LOCATIONS**

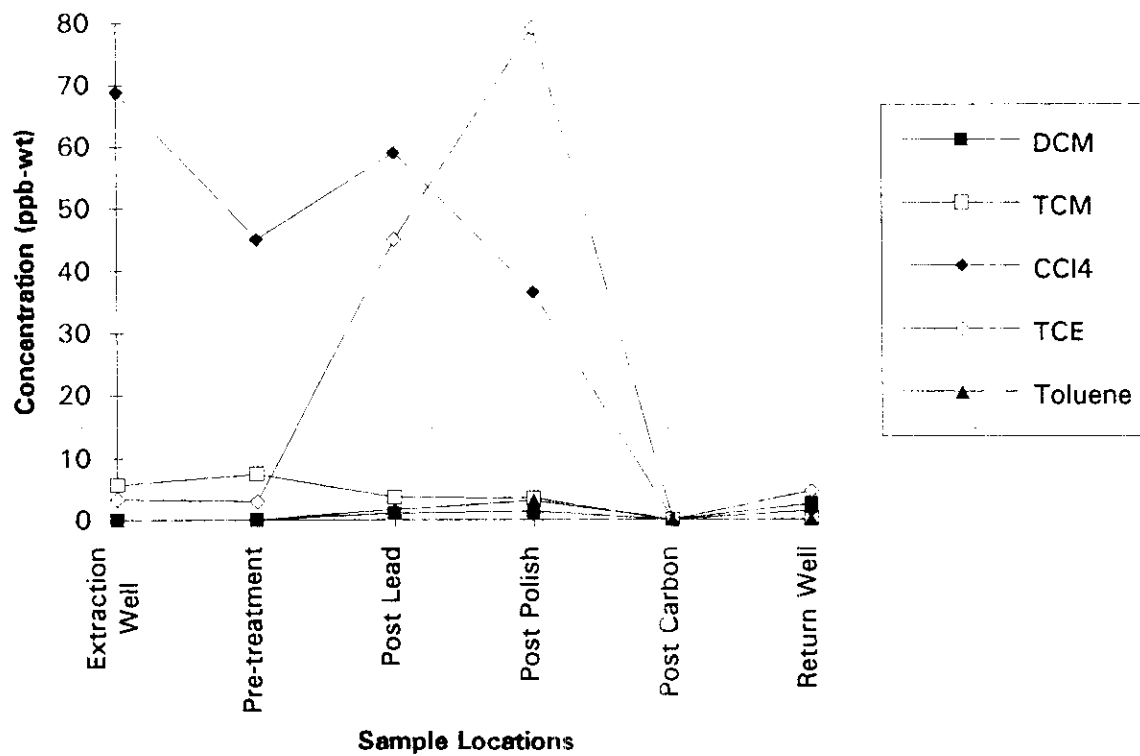






UP-1 Pump and Treat Process Samples - 07/13/94								
VOC Concentrations (ppb-wt)								
Sample #	Time	Location	DCM	TCM	CCl4	TCE	Toluene	o-Xylene
G-1	13:15	Extraction Well	ND	5.7	68.8	3.3	ND	ND
G-2	13:17	Pre-treatment	ND	7.5	45.1	3	ND	ND
G-3	13:20	Post Lead	1.1	3.6	59	45	1.7	ND
G-4	13:23	Post Polish	1.4	3.5	36.6	79.1	3.1	ND
G-5	13:26	Post Carbon	ND	ND	ND	ND	ND	ND
G-6	13:30	Return Well	2.6	ND	1.5	4.7	ND	ND
F-6	10:56	Return Well	ND	ND	0.8	3.3	ND	ND
H-6	14:30	Return Well	ND	ND	ND	1.7	ND	ND

UP-1 Pump and Treat Process Samples - 7/13/94 (pm)



200-UP-1 LAB-SCALE TEST STATUS

- Test viable resins for effectiveness on 200-UP-1 groundwater
- Tested 7 candidate resins using equilibrium distribution method
- Each resin tested at pH of 7 and 9
- Dowex 21K and Dowex 21K XLT performed best on both U-tot and Tc-99

**September 28, 1994 Unit Managers Meeting
Project Status of the 200 West Area Carbon Tetrachloride ERA**

1. As of Wednesday, September 21, the ERA has removed a total of 37,177 kgs (81,789 lbs) of CCl₄.
2. Continuing to operate 24 hours/day, 7 days/week, at the Z-1A tile field and Z-18 crib.
3. Currently operating 8 hours/day, 5 days/week, at the Z-9 trench. About two weeks delayed in starting 24 hours/day operation due to unexpected need to purchase additional process control memory to support automated CCl₄ sampling. Current schedule is middle of October.
4. Postponed plans to expand wellfield extraction capacity using jet-shot perforating due to complications with handling the waste materials as hazardous waste.
5. Finalizing draft CCl₄ treatment alternatives study.
6. Incorporating comments into Wellfield Strategy (Optimization) Report.
7. Working on the Proposed Plan for the 200-ZP-2 Operable Unit.
8. Preparing to test two CCl₄ treatment systems in FY 95, Tunable Hybrid Plasma (VOC Arid-ID), and PURUS Padre (Technology Transfer).

200 West CCl₄ ERA Monthly Report
August 1994

1. VES Operations

216-Z-1A Site - The 1000 cfm VES continued 24 hour per day, 7-day-per-week operation. HEPA filter change (primarys) on 8/24 - 8/25. VE System did not operate during that time.

216-Z-9 Site - The 1500 cfm unit continued to operate on dayshift. Because of a malfunctioning Variable Frequency Drive (VFD), system capability was limited to 1000 cfm from 8/3 to 8/11.

216-Z-18 Site - The 500 cfm unit, which began operation on June 30, began 24 hour per-day, 7 day per-week operation on 8/3.

GAC Shipments - Received 9 regenerated GACs and shipped 9 GACs on 8/22. Received an additional 9 regenerated GACs on 8/26.

2. CCl₄ Extraction Data

MONTHLY CCl ₄ EXTRACTION SUMMARY						
Operational Period	VES System (cfm)	Avg. Flow (scfm)	Avg. Conc. (ppmv)	Time (hrs)	System Availability (percent)	CCl ₄ Extracted kg/(lbs)
8/1 - 8/31	500	413.	205.	521.9	70%	458 (1,007)
	1000	586.	277.	675.7	91%	1,160 (2,553)
	1500	982.	2,090.	179.3	88%	3,635 (7,998)
1994 Total As of 8/31						29,589 (65,096)
1993 Total						3,607 (7,932)
1992 Total						958 (2,111)
GRAND TOTAL						34,154 (75,139)

STATUS OF THE 200-ZP-1 OPERABLE UNIT

SEPTEMBER 28, 1994

D. Parker

- Treatability Test

- o Volume Extracted: 119,740 gallons
- o Volume Treated: 117,000 gallons
- o Volume Injected: 112,710 gallons
- o Influent Concentrations: Approximately 2300 - 1200 ppb
- o Effluent Concentrations: Nondetect

200-ZP-1 STATUS

- Groundwater Monitoring Streamlining Proposal**
 - o First round of sampling underway**
 - o Results available mid-November**
 - o Evaluate sampling results and develop proposal**

Distribution

Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
September 28, 1994

Paul Pak DOE-RL, PRD (H4-83)
Donna Wanek DOE-RL, PRD (H4-83)
Jennifer Young DOE-RL, PRD (H4-83)
Mary Harmon DOE-HQ (EM-442)
Richard Person DOE-HQ (EM-442)

Paul Beaver 200 Aggregate Area Manager, EPA (B5-01)
Bill Lum USGS, Support to EPA
Jim Pankanin PRC, Support to EPA

Dib Goswami WDOE (Kennewick)
Larry Goldstein WDOE (Lacey)

Lynn Albin Washington Dept. of Health

Curt Wittreich BHI (H6-02)
Joe Zoghbi (Please route to:) BHI (~~H4-79~~) H6-04
M.J. Galgoul BHI (H6-01)
Dave Erb BHI (H6-01)
Jhivaun Freeman-Pollard BHI (H6-04)
Dan Parker BHI (H6-02)
Sean Driggers BHI (H6-01)
Ken Porter BHI (H6-01)
Diana Sickle BHI (H6-27)
Kay Kimmel MAC (B1-42)
Alvina Goforth BHI (H6-08)
R. Scott Hajner BHI (H4-79)
Andrea Hopkins BHI (H4-79)
Tom Page (Please route to:) PNL (K1-31)

Cheryl Thornhill . . . PNL (K1-19) Steve Slate . . . PNL (K1-19)
Mark Hanson . . . PNL (K1-51) Bill Stillwell . . . PNL (K1-30)
~~Roy Gephart~~ . . . PNL (K1-22) Ben Johnson . . . PNL (K1-78)

GE RYH HCN RLL

HC-04

Original Sent To: ADMINISTRATIVE RECORD: 200 AAMS Care of EDMC, WHC (H6-08)

Please inform Kay Kimmel (946-3692) GSSC - Mactec/Dames & Moore (B1-42) of deletions or additions to the distribution list. Last updated 02/16/95.